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ABSTRACT

Today's students experience a great deal of pressure to succeed in school. Since predictors of academic performance are widely used to assess student capabilities, the relationship between one such test, the California Psychological Inventory (CPI), and academic success are examined in this paper. The focus here is on the non-cognitive variables of the CPI and how they can serve as valid indicators of academic success. An overview of academic achievement is offered, along with a discussion of the relevant literature on non-cognitive variables that have been associated with school success. This discussion is followed by a general history of the CPI, which was published in its original form in 1957. The purpose of the inventory and a brief description of its 20 scales are likewise provided. The relationship between the CPI and academic success is detailed, with an emphasis on locus of control, self-efficacy, and expectations. It is claimed that given the current status of research, it is difficult to draw definitive conclusions regarding the use of the CPI as an indicator of school success. Nonetheless, non-cognitive variables such as self-efficacy, which may enhance academic success, can be identified. Contains 15 references. (RJM)

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Running head: THE CPI

The CPI as a Predictor of Academic Success

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Abstract

The purpose of this paper is to examine the relationship between the California Psychological Inventory (CPI) and academic success, and to show how the non-cognitive variables of the CPI can be good indicators of academic success. Academic success is discussed along with the relevant literature, which illustrates the importance of non-cognitive variables when assessing academic success. A general overview of the CPI is given, including the history, purpose, and a brief description of the twenty scales. Finally, the relationship between the CPI and academic success is discussed. Specific scales of the CPI are explored as being indicators of non-cognitive variables which affect academic success. The need for further research is discussed as well.

The CPI as a Predictor of Academic Success

In today's world, there is a significant amount of pressure put on students to succeed. Technology has made students capable of learning more information in a less amount of time. The academic success of students is imperative for those students who want to continue on with their college education. It is also important for professionals who work within the educational realm to have a thorough understanding of academic success, and what factors contribute to it. Therefore, if students are not achieving their potential, professors, academic counselors, and students can examine other factors, such as non-cognitive variables, which largely impact success as well.

Researchers have shown that several non-cognitive characteristics have been identified as having relevance to academic performance. In 1994, Isberner and Kirkland examined ways to improve academic performance and retention through tutoring programs. They discussed the importance of non-cognitive issues such as locus of control, self-efficacy, self-esteem, and expectations, and the impact that these characteristics have on the academic success of students. They also explained the significance of trained tutors having an understanding of non-cognitive issues which can impact the outcomes of tutoring, and therefore academic success as well.

According to a study conducted by Phares (1976), locus of control is an important factor which affects achievement. According to Visor, Johnson, and Cole, "locus of control centers on individuals' feelings that they are 'in charge' of their own destiny" (1992, p. 14). Students may be characterized as having an internal locus of control, an external locus of control, or any level in between. "Internals" believe that the things that happen to them occur because of their own actions. "Externals" on the other hand, believe that the things that happen to them occur due to factors outside of their control. Students who are more internal tend to accomplish higher levels of achievement than do those who

are external (Visor et al.). For example, these students may believe that if they study hard and do their homework, then they will see positive results because of their actions. Students with an external locus of control may not study for an exam, because they may feel that their performance on a test is outside of their control.

Self-efficacy has also been recognized as affecting academic achievement (Lent, Brown, & Larkin, 1986). According to these authors, self-efficacy involves student's beliefs that they have the ability or competence to achieve at a specific task. Bandura noted "the stronger the perceived efficacy, the more likely are people to persist in their efforts until they succeed" (1982, p. 123). Therefore, it may make sense that students who feel they are academically effective will continue to strive for higher grades, until they have reached their level of success.

Self-esteem is another variable that has been identified as having an affect on academic achievement (Tracy & Sedlacek, 1985). These authors defined self-esteem as an individual's opinion about his or her value as a person. Students who possess high self-esteem are likely to perform more favorably in many areas. Students who have a low self-esteem, on the other hand, may have low self-worth and therefore they may not care about their academic performance. They may set low standards for themselves and lack the motivation it takes to achieve success.

Several studies have examined the relationship between student attitudes and consequent academic performance. Academic self-concept and student expectancies of achievement are two of the most commonly studied attitudes (House, 1992). Academic self-concept refers to a student's perceptions regarding their academic abilities. According to Shavelson and Bolus, (1982), school experiences influence these perceptions, as well as the student's interpretations of those experiences in the context of the school surroundings. Academic self-concept is a characteristic that is constantly being changed due to the variations in school performance. Therefore inconsistent results may be found when comparing academic self-concept with academic achievement.

Achievement related expectancies refer to students' expectations of their future accomplishments in school (Vollmer, 1986). There has been a large amount of interest in the relationship between achievement related expectancies and academic performance. However, according to House (1992), most of these studies have focused on elementary and secondary school students. There has been a limited amount of research that has examined the predictive validity of students' achievement related expectancies and their succeeding school performance (House, 1992). In 1989, Gordon found that the academic expectations of undergraduate college students enrolled in general education courses accounted for significant amounts of variance in three assessments of course performance, followed by test grade, final exam grade, and final course grade. In 1973, similar results were found by Morrison, Thomas, and Weaver. These researchers found a significant correlation between students' prediction of their grade on a paper and the actual grade they later received. Students' expectations about future grades may be consistent with the outcome for several reasons. Students have the ability to judge their knowledge of a particular subject and therefore can more accurately predict the result. Also, students know how much effort they are willing to put forth to achieve certain outcomes.

The California Psychological Inventory

The California Psychological Inventory (CPI) was first developed by Harrison Gough and published in its original form in 1957 (Groth-Marnat, 1990). It was further revised in 1987. The CPI was created as a personality inventory and the purpose was "to assess enduring interpersonal personality characteristics within a normal population" (Groth-Marnat, p. 236). Assessments such as the Minnesota Multiphasic Personality Inventory (MMPI), which many researchers had utilized prior to the introduction of the CPI, tended to be geared toward the psychopathological individual. The CPI, on the other hand, measured the necessary variables and was geared toward the "normal" population. The twenty scales are divided into four clusters, with each cluster testing

similar items. The first cluster consists of seven scales: Dominance (DO), Capacity for status (Cs), Sociability (Sy), Social Presence (Sp), Self-acceptance (Sa), Independence (In), and Empathy (Em). Responsibility (Re), Socialization (So), Self-control (Sc), Tolerance (To), Good Impression (Gi), Communality (Cm), and Sense of Well Being (Wb), constitute the second cluster. The Third cluster consists of Achievement via Conformance (Ac), Achievement via Independence (Ai), and Intellectual efficiency (Ie). The fourth and final cluster is made up of Psychological Mindedness (Py), Flexibility (Fx), and Femininity/Masculinity (F/M). In the 1987 revision, aspects of the CPI were formalized through the development of three vectors (Groth-Marnat, 1990). Each vector can be used to gain an overall summary of personality. The first vector describes a persons internality (shy, reserved) versus externality (talkative, outgoing), the second portrays norm-favoring versus norm questioning, and the third illustrates a person's level of personality adjustment. Scores on the first two vectors are used to categorize people into four quadrants: alphas, betas, gammas, and deltas.

CPI and Academic Success

Several studies have been conducted which have attempted to examine the relationship between the CPI and academic achievement. According to Megargee, "one of the most important discoveries to emerge from such research is that different personality characteristics are associated with different levels of achievement" (1972, p. 161). The early research of Holland & Astin (1962), suggested that achievement is best predicted by examining both cognitive and non-cognitive measures. Therefore, the CPI can be an appropriate tool to use. Hogan and Weiss (1974, p. 144), stated "the CPI has shown promise and usefulness." Scales such as achievement via conformance (Ac), and achievement via independence (Ai), provide an index of performance. Other scales such as dominance (Do), sociability (Sy), self-acceptance (Sa), well-being (Wb), social presence (Sp) and others provide an indication of non-cognitive measures.

Locus of Control

Having gained information regarding the CPI and having defined non-cognitive characteristics which influence academic success, academic counselors may find that certain scales on the CPI can help them to better identify these attributes. The Dominance (Do) scale on the CPI may be an indicator of students' locus of control. If a student obtains moderate to high scores on the dominance scale, this may be evidenced by their leadership ability. The individual may possess qualities of assertiveness, and self-confidence, which may suggest that they have an internal locus of control and are "in charge" of their own destiny. A moderate to high score on the Sociability (Sy) scale may portray an internal locus of control as well. Students who score in this range are seen as engaging, talkative, and pleasure-seeking, and may feel that they will influence others by their actions. Intellectual efficiency (Ie) may also be an indicator of locus of control. If students score a moderate to high score on this scale they tend to make efficient use of the potential they possess, and this would suggest the student has an internal locus of control. Students who score low may have an external locus of control and may not make use of their resources due to their belief that the things that happen to them occur because of factors outside of their control.

Self-Efficacy

Self-efficacy can be identified through certain scales on the CPI as well. Scales such as Dominance, Self-acceptance, and Sense of Well Being are indicative of characteristics such as self-confidence, self-worth, and self-esteem, all of which contribute to self-efficacy. This suggests that if students score moderate to high scores on these scales, they may have strong self-efficacy.

Self-Esteem

Self-esteem is another non-cognitive variable that can be detected through specific scales of the CPI. Scales such as Dominance (DO), Capacity for status (Cs), Sociability

(Sy), Social Presence (Sp), and Self-acceptance (Sa) can be predictive of a student's self-esteem. Dominance (DO) and Self-acceptance (Sa) are both indicative of self-confidence and self-worth, and therefore coincide well with self-esteem. Students with good self-esteem are likely to see themselves as either currently having status (Cs), or possessing the traits to obtain status in the future. Students may also tend to score high on the Sociability (Sy) and Social Presence (Sp) scales. Due to their positive feelings about themselves, they may be extroverted (talkative) and feel comfortable in social situations as shown by their engaging behavior.

Expectations

Student attitudes such as academic self-concept, and achievement related expectancies can also be represented through certain scales on the CPI. The Self-control scale (Sc), which measures the level to which a person can self direct their own behavior and measures goal-oriented behavior can predict these student attitudes. If a student possesses these qualities, they are more likely to have a good academic self-concept, and are likely to have favorable expectations regarding their future tasks. However, if students do not possess these characteristics, they may experience difficulties in staying focused on academics, and therefore may have a low academic self-concept, and their achievement related expectancies may be inhibited. The Achievement via Independence (Ai) scale can also help to predict student attitudes. This scale was designed to predict achievement in a college environment. Thus, students who score moderate to high on this scale may have a good academic self-concept and may have favorable expectations regarding future accomplishments.

Conclusions and Future Directions

Although there is a significant amount of research that has been conducted using the CPI, much of it is outdated. There is a need for current research to reflect contemporary

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society. Due to the increased number of students attending college, there is a greater need to study academic success and its contributing factors.

Given the current status of the research, it is difficult to draw definitive conclusions regarding the use of the CPI as an indicator of academic success. However, several non-cognitive variables which may enhance academic success can be tentatively identified through the CPI. Variables such as self-efficacy, self-esteem, and expectations can be related to certain scales of the CPI such as dominance (Do), sociability (Sy), self-acceptance (Sa), well-being (Wb), social presence (Sp), and others.

The CPI is a complex instrument to administer and interpret. Future researchers may want to develop an easier instrument with a similar purpose. Perhaps if this was an assessment that was more efficient and was not as difficult to score, academic counselors could more readily use this instrument on an ongoing basis. This would give them the opportunity to use this assessment in academic learning centers across college and university campuses. Counselors could administer this test to students and get an accurate insight of the students needs within the academic realm. For example, if a student is not achieving their potential, the CPI could help academic counselors to understand other variables that may be affecting performance. Counselors can therefore take the appropriate steps to help the student meet their needs.

References

Bandura, A. (1982). Self-efficacy mechanism in human agency. American Psychologist, 37, 122-147.

Gordon, R. A. (1989). Intention and expectation measures as predictors of academic performance. Journal of Applied Social Psychology, 19, 405-415.

Groth-Marnat, G. (1990). Handbook of Psychological Assessment. 2nd edition. New York: John Wiley & Sons.

Hogan, R., & Weiss, D. S. (1974). Personality correlates of superior academic achievement. Journal of Counseling Psychology, 21, 144-149.

Holland, J. L., & Astin, A. W. (1962). The prediction of academic, artistic, scientific, and social achievement of undergraduates of superior scholastic aptitude. Journal of Educational Psychology, 53, 132-143.

House, J. D. (1992). The relationship between academic self-concept, achievement-related expectancies, and college attrition. Journal of College Student Development, 33, 5-10.

Isberner, F., Kirkland, D. (1994). Suggestions for postsecondary tutoring programs to improve academic performance and retention. ATEA Journal, Dec. 1994-January 1995, 6-8.

Lent, R. W., Brown, S. D., & Larkin, K.C. (1986). Self-efficacy in the predicting of academic performance and perceived career options. Journal of Counseling Psychology, 33, 265-269.

Megargee, E. I. (1972). The california psychological inventory handbook. San Francisco: Jossey-Bass.

Morrison, T. L., Thomas, M. D., & Weaver, S. J. (1973). Self-esteem and self-estimates of academic performance. Journal of Consulting and Clinical Psychology, 41, 412-415.

Phares, E. J. (Ed.). (1976). Locus of control in personality. Morristown, NJ: General Learning Press.

Shavelson, R. J., & Bolus, R. (1982). Self-concept: The interplay of theory and methods. Journal of Educational Psychology, 74, 3-17.

Tracey, T. J., & Sedlacek, W. E. (1985). The relationship of non-cognitive variables to academic success: A longitudinal comparison by race. Journal of College Student Personnel, 26, 405-410.

Visor, J. N., Johnson, J. J., & Cole, L. N. (1992). The relationship of supplemental instruction to affect. Journal of Developmental Education, 16, 12-18.

Vollmer, F. (1986). The relationship between expectancy and achievement- how can it be explained? British Journal of Educational Psychology, 56, 64-74.